What is claimed is:

1. A DNA sequence encoding a polypeptide of the formula

WYBAZCX

wherein WYBAZCX is composed of the polypeptide segments shown in Figure 31 (SEQ ID Nos. 136-139, 141-147, 160, 161, and 163); wherein W comprises polypeptide segment F, or is absent; wherein Y comprises polypeptide segment E, or is absent; wherein Z comprises polypeptide segment G or is absent; and wherein X comprises polypeptide segments C/D HKL, C/D H, C/D HL, C/D D, C/D' HL, C/D' HKL, C/D' H, C/D' D, C/D C/D' HKL, C/D C/D' H, C/D C/D' HL, C/D C/D' D, C/D D' H, C/D D' HL, C/D D' HKL, C/D' D' H, C/D' D' HKL, C/D C/D' D' H, C/D C/D' D' HL, C/D C/D' D' HKL, or C/D' D' HL; provided that, either

a) at least one of F, Y, B, A, Z, C, or X is of bovine origin; or

b) Y comprises polypeptide segment E; or

c) X comprises polypeptide segments C/D HKL, C/D D, C/D' HKL, C/D C/D' HKL, C/D C/D' D, C/D D' H, C/D D' HL, C/D D' HKL, C/D' D' H, C/D' D' HKL, C/D C/D' D' H, C/D C/D' D' HL, C/D C/D' D' HKL, C/D'H, C/D C/D'H, or C/D C/D'HL.

2. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D HKL having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-142, 146, 147, 160, 161).

3. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D' H having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 143, 146, 160).

4. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D D having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 142, 144, 160).

5. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D' HKL having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 143, 146, 147, 160, 161).

6. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D C/D' HKL having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 146, 147, 160, 161).

7. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D C/D' H having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 146, 160).

8. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D C/D' HL having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 146, 147, 160).

9. Th DNA s quenc f claim 1, wher in X comprises polypeptid segments C/D C/D' D having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-144, 160).

10. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D D'H having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-142, 145, 146, 160).

11. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D D'H L having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-142, 145, 146, 147, 160).

12. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D D'H K L having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-142, 145-147, 160, 161).

13. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D' D' H having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 143, 145, 146, 160).

14. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D' D' H K L having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 143, 145-147, 160, 161).

15. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D C/D' D' H having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 145, 146, 160).

16. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D C/D' D' H L having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 145-147, 160).

17. The DNA sequence of claim 1, wherein X comprises polypeptide segments C/D C/D' D' H K L having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 145-147, 160, 161).

18. The DNA sequence comprising coding segments $^{5'}$FBA$^{3'}$ coding for polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136, 138, 139).

19. The DNA sequence comprising coding segments $^{5'}$FBA$^{3'}$ coding for polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136, 138, 140).

20. The DNA sequence comprising coding segments $^{5'}$FEBA$^{3'}$ coding for polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 163).

21. The DNA sequenc comprising oding segments 5'FEBA'3' oding for polyp ptide s gments having th amino acid s quenc s shown in Figur 31 (SEQ ID Nos. 136-138, 140, 163).

22. Purified DNA encoding GGF2HBS5.

23. A polypeptide of the formula

WYBAZCX

wherein WYBAZCX is composed of the polypeptide segments shown in Figure 31 (SEQ ID Nos. 136-139, 141-147, 160, 161, 163); wherein W comprises polypeptide segment F, or is absent; wherein Y comprises polypeptide segment E, or is absent; wherein Z comprises polypeptide segment G or is absent; and wherein X comprises peptide segments C/D HKL, C/D H, C/D HL, C/D D, C/D' HL, C/D' HKL, C/D' H, C/D' D, C/D C/D' HKL, C/D C/D' H, C/D C/D' HL, C/D C/D' D, C/D D' H, C/D D' HL, C/D D' HKL, C/D' D' H, C/D' D' HKL, C/D C/D' D' H, C/D C/D' D' HL, C/D C/D' D' HKL, or C/D' D' HL; provided that, either

a) at least one of F, Y, B, A, Z, C, or X is of bovine origin; or

b) Y comprises polypeptide segment E; or

C) X comprises polypeptide segments C/D HKL, C/D' HKL, C/D D, C/D C/D' HKL, C/D C/D' D, C/D D' H, C/D D' HL, C/D D' HKL, C/D' D' H, C/D' D' HKL, C/D C/D' D' H, C/D C/D' D' HL, C/D C/D' D' HKL, C/D'H, C/D C/D'H, or C/D C/D'HL.

24. A polypeptide of claim 23, wherein X comprises C/D HKL polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-142, 146, 147, 160, 161).

25. A polypeptide of claim 23, wherein X comprises C/D D polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 142, 144, 160).

26. A polypeptide of claim 23, wherein X comprises C/D' H polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 143, 146, 160).

27. A polypeptide of claim 23, wherein X comprises C/D' HKL polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 143, 146, 147, 160, 161).

28. A polypeptide of claim 23, wherein X comprises C/D C/D' HKL polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 146, 147, 160, 161).

29. A polypeptide of claim 23, wherein X comprises C/D C/D' H polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 146, 160).

30. A polypeptid f claim 23, wh r in X ompris s C/D C/D' HL polypeptid segments having th amin acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143,146, 147, 160).

31. A polypeptide of claim 23, wherein X comprises C/D C/D' D, polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-144, 160).

32. A polypeptide of claim 23, wherein X comprises C/D D'H polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 142, 145, 146, 160).

33. A polypeptide of claim 23, wherein X comprises C/D D'H L polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 142, 145-147, 160).

34. A polypeptide of claim 23, wherein X comprises C/D D'H K L polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 142, 145-147, 160, 161).

35. A polypeptide of claim 23, wherein X comprises C/D' D' H polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 143, 145, 146, 160).

36. A polypeptide of claim 23, wherein X comprises C/D' D' H K L polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141, 143, 145-147, 160, 161).

37. A polypeptide of claim 23, wherein X comprises C/D C/D' D' H polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 145, 146, 160).

38. A polypeptide of claim 23, wherein X comprises C/D C/D' D' H L polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 145-147, 160).

39. A polypeptide of claim 23, wherein X comprises C/D C/D' D' H K L polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 141-143, 145-147, 160, 161).

40. A polypeptide comprising FBA polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136, 138, 139).

41. A polypeptide comprising FBBA polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 163).

42. A polypeptide comprising FBA' polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136, 139, 140).

43. A polypeptide comprising FEBA' polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 140, 163).

44. Purified GGF2HBS5 polypeptide.

45. A basic polypeptide factor having mitogenic activity stimulating the division of Schwann cells in the presence of fetal calf plasma, said polypeptide having a molecular weight of from about 30 kD to about 36 kD, said polypeptide including within its amino acid sequence any one or more of the following polypeptide sequences:

F K G D A H T E
A S L A D E Y E Y M X K
T E T S S S G L X L K
A S L A D E Y E Y M R K
A G Y F A E X A R
T T E M A S E Q G A
A K E A L A A L K
F V L Q A K K
E T Q P D P G Q I L K K V P M V I G A Y T
E Y K C L K F K W F K K A T V M
E X K F Y V P
K L E F L X A K

46. A basic polypeptide factor having mitogenic activity stimulating the division of Schwann cells in the presence of fetal calf plasma, said polypeptide having a molecular weight of from about 55 kD to about 63 kD, and said polypeptide including within its amino acid sequence any one or more of the following peptide sequences:

V H Q V W A A K
Y I F F M E P E A X S S G
L G A W G P P A F P V X Y
W F V V I E G K
A S P V S V G S V Q E L V Q R
V C L L T V A A L P P T
K V H Q V W A A K
K A S L A D S G E Y M X K
D L L L X V
E G K V H P Q R R G A L D R K
P S C G R L K E D S R Y I F F M E
E L N R K N K P Q N I K I Q K K

47. A method for stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide defined by the formula

WYBAZCX

wherein WYBAZCX is composed of the polypeptide segments shown in Figure 31 (SEQ ID Nos. 136-139, 141-147, 160, 161, 163); wherein W comprises polypeptide segment F, or is absent; wherein Y comprises polypeptide segment E, or is absent; wherein Z comprises polypeptide segment G or is absent; and wherein X comprises polypeptide segments C/D HKL, C/D H, C/D HL, C/D D, C/D' HL, C/D' HKL, C/D' H, C/D' D, C/D C/D' HKL, C/D C/D' H, C/D C/D' HL, C/D C/D' D, C/D D' H, C/D D' HL, C/D D' HKL, C/D' D' H, C/D' D' HL, C/D' D' HKL, C/D C/D' D' H, C/D C/D' D' HL, or C/D C/D' D' HKL.

48. A method for stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide comprising FBA polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136, 138, 139).

49. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide comprising FBA′ polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136, 138, 140).

50. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide comprising FEBA polypeptide segments having the amino acid sequences shown in Figure 31 (SEQ ID Nos. 136-139, 163).

51. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide comprising FEBA′ polypeptide segments having the amino acid sequences corresponding to polypeptide segments shown in Figure 31 (SEQ ID Nos. 136-138, 140, 163) to glial cells.

52. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with GGF2HBS5 polypeptide.

53. A method of stimulating mitogenesis of a glial cell said method comprising contacting said glial cell with a compound which specifically binds the $p185^{erbB2}$ receptor of glial cells.

54. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide, comprising EGFL1, having the amino acid sequence shown Fig. 38, Seq. ID No. 154.

55. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide, comprising EGFL2, having the amino acid sequence shown in Figure 39, Seq. ID No. 155.

56. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide, comprising EGFL 3, with the amino acid sequence shown in Fig. 40, Seq. ID No. 156.

57. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide, comprising EGFL4, with the amino acid sequence shown in Fig. 41, Seq. ID No. 157.

58. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide, comprising EGFL5, with the amino acid sequence shown in Fig. 42, Seq. ID No. 158, to glial cells.

59. A method of stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide, comprising EGFL6, with the amino acid sequence shown Fig. 43, Seq. ID No. 159.

60. A method for the prophylaxis or treatment of a pathophysiological condition of the nervous system in a mammal in which said condition involves a cell type which is

sensitiv r r sponsive to a polypeptide as defin d in any on of claims 1 and 18-22, said method comprising administering to said mammal an effective amount of said polypeptide.

61. A method as claimed in claim 60, wherein said condition involves peripheral nerve damage.

62. The method as claimed in claim 60, wherein said condition involves glia of the central nervous system.

63. A method of stimulating mitogenic activity in a glial cell, said method comprising applying 35 kD polypeptide factor isolated from the rat I-EJ transformed fibroblast cell line to said glial cell.

64. A method of stimulating mitogenic activity in a glial cell, said method comprising applying 75 kD polypeptide factor isolated from the SKBR-3 human breast cell line to said glial cell.

65. A method of stimulating mitogenic activity in a glial cell, said method comprising applying 44 kD polypeptide factor isolated from the rat I-EJ transformed fibroblast cell line to said glial cell.

66. A method of stimulating mitogenic activity in a glial cell, said method comprising applying 45 kD polypeptide factor isolated from the MDA - MB 231 human breast cell line to said glial cell.

67. A method f stimulating mitogenic activity in a glial cell, said method comprising applying 7 to 14 kD polypeptide factor isolated from the ATL-2 human T-cell line to said glial cell.

68. A method of stimulating mitogenic activity in a glial cell, said method comprising applying 25 kD polypeptide factor isolated from activated mouse peritoneal macrophages to said glial cell.

69. A method of stimulating mitogenic activity in a glial cell, said method comprising applying a 25 kD polypeptide factor isolated from bovine kidney to said glial cell.

70. A method of stimulating mitogenic activity in a glial cell, said method comprising applying ARIA polypeptide to said glial cell.

71. A polypeptide factor having glial cell mitogenic activity and including an amino acid sequence encoded by:-

(a) a DNA sequence shown in any one of Figures 28a, 28b or 28c (SEQ ID Nos. 133-135, respectively).

(b) a DNA sequence shown in Figure 22 (SEQ ID No. 89);

(c) the DNA sequence represented by nucleotides 281-557 of the sequence shown in Figure 28a.

(d) a DNA sequence hybridizable to any one of the DNA sequences according to (a), (b) or (c).

72. A basic polypeptid fact r having a mol cular weight, whether in reducing conditions or not, of from about 30 kD to about 36 kD on SDS-polyacrylamide gel electrophoresis, said polypeptide factor having mitogenic activity stimulating the division of rat Schwann cells in the presence of fetal calf plasma, and when isolated using reversed-phase HPLC retaining at least 50% of said activity after 10 weeks incubation in 0.1% trifluoroacetic acid at 4°C.

73. A basic polypeptide factor having a molecular weight, under non-reducing conditions, of from about 55 kD to about 63 kD on SDS-polyacrylamide gel electrophoresis, said polypeptide factor having mitogenic activity stimulating the division of rat Schwann cells in the presence of fetal calf plasma, and when isolated using reversed-phase HPLC retains at least about 50% of said activity after 4 days incubation in 0.1% trifluoroacetic acid at 4°C.

74. A method for the preparation of a polypeptid defined in claim 72 or claim 73, said method comprising extracting vertebrate brain material to obtain protein, subjecting said protein to chromatographic purification comprising hydroxylapatite HPLC and thereafter to SDS-polyacrylamide gel electrophoresis and collecting that fraction therefrom which has an observed molecular weight of about 30 kD to 36 kD and/or that fraction which has an observed molecular weight of about 55 kD to 63 kD if, in either case, subjected to SDS-polyacrylamide gel electrophoresis; in the case of said smaller molecular weight fractions whether in reducing conditions or not, and in the case of said larger molecular weight fraction under non-reducing conditions, and which fraction(s) exhibit(s) mitogenic activity stimulating the division of rat Schwann cells against a background of fetal calf plasma.

75. A method as claimed in claim 74, wherein the brain material in said method is pituitary material.

76. A method as claimed in claim 75, wherein said pituitary material in said method is bovine.

77. A method as claimed in claim 74, wherein said protein used in said method is initially extracted from brain material is first subjected to carboxymethyl cellulose chromatography.

78. A method as claimed in claim 74 wherein after said hydroxylapatite HPLC, said method uses cation exchange chromatography, gel filtration, and/or reversed-phase HPLC.

79. A method as claimed in claim 74, wherein at each stage of said method biological activity of material obtained is assessed for mitogenic activity stimulating the division of rat Schwann cells in the presence of fetal calf plasma.

80. A method for assaying a substances for glial cell mitogenic activity, said method comprising contacting said substance with glial cells in the presence of fetal calf plasma, and the measuring DNA synthesis in said glial cells as a measure of glial cell mitogenic activity.

81. An assay as claimed in claim 80, wherein said glial cells are Schwann cells.

82. A DNA sequence encoding a polypeptide having glial cell mitogenic activity and comprising:

(a) a DNA sequence shown in any one of Figures 28a, 28b, or 28c (SEQ ID Nos. 133-135)

(b) a DNA sequence shown in Figure 22 (SEQ ID No. 89);

(c) the DNA sequence represented by nucleotides 281-557 of the sequence shown in Figure 28a; or

(d) a DNA sequence hybridizable to any one of the DNA sequences according to (a), (b) or (c).

83. A polypeptide which is a glial cell mitogen, said polypeptide being encoded by a DNA sequence as defined in claim 82, said polypeptide obtained by a method comprising for the preparation of a glial cell mitogenic factor, said method cultivating modified host cells under conditions permitting expression of said DNA sequence.

84. A v ct r comprising a DNA s quenc as d fin d in claim 82.

85. A host cell containing the isolated DNA of claim 84.

86. A method for the preparation of a glial cell mitogenic factor, said method comprising cultivating modified host cells as defined in claim 85 under conditions permitting expression of said DNA sequence.

87. A polypeptide which is a glial cell mitogen, said polypeptide being encoded by a DNA sequence as defined in claim 1, said polypeptide obtained by a method comprising for the preparation of a glial cell mitogenic factor, said method cultivating modified host cells under conditions permitting expression of said DNA sequence.

88. A polypeptide which is a glial cell mitogen, said polypeptide being encoded by a DNA sequence as defined in any one of claims 18-22, said polypeptide obtained by a method comprising for the preparation of a glial cell mitogenic factor, said method cultivating modified host cells under conditions permitting expression of said DNA sequence.

89. A method for detecting, in a sample, the presence of a molecule having a receptor binding characteristic of a polypeptide defined in any one of claims 23, 40-46, 71-73, or 87, said method comprising the steps of

a) contacting said sample with a polypeptide of any one of claims 22, 39-42, 63-65, 72, 73 or 80, along with a

receptor capabl of binding specifically t said polypeptide, and

b) detecting competitive inhibition of the binding of said polypeptide to said receptor as an indication of the presence of a receptor binding molecule in said sample.

90. A method for the prophylaxis or treatment of a glial tumor in a patient, said method comprising administering to said patient an effective amount of a substance which inhibits the binding of a factor as defined in any one of claims 23, 40-46, 71-73, or 87 to a receptor therefor.

91. A pharmaceutical or veterinary formulation comprising a polypeptide as defined in any of claims 23, 40-46, 71-73, or 87 formulated for pharmaceutical or veterinary use, respectively, together with an acceptable diluent, carrier or excipient and/or in unit dosage form.

92. A method for stimulating mitogenesis of a glial cell, said method comprising contacting said glial cell with a polypeptide as defined in any one of claims 23, 40-46, 71-73, or 87.

93. A polypeptide, as defined in any one of claims 23, 40-46, 71-73, or 87 for use as a glial cell mitogen.

94. A method for stimulating mitogenesis of a glial cell in a vertebrate, said method comprising contacting said glial cell with an effective amount of a polypeptide defined in any one of claims 23, 40-46, 71-73, or 87 to glial cells.

95. A method for the prophylaxis or treatment of pathophysiological condition of the nervous system in a mammal in which said condition involves a cell type which is sensitive or responsive to a polypeptide as defined in any one of claims 23, 40-46, 71-73, or 87, said method comprising administering an effective amount of said polypeptide.

96. A method for the treatment of a condition which involves peripheral nerve damage in a mammal, said method comprising contacting said peripheral nerves with an effective amount of a polypeptide, as defined in any one of claims 23, 40-46, 71-73, or 87.

97. A method for the prophylaxis or treatment of a condition in a mammal in said condition involves demyelination or damage or loss of Schwann cells, for example a neuropathy of sensory or motor nerve fibers, said method comprising contacting said Schwann an effective amount of a polypeptide, as defined in any one of claims 23, 40-46, 71-73, or 87.

98. A method for the prophylaxis or treatment of a neurodegenerative disorder in a mammal, said method comprising contacting glial cells in a mammal with an effective amount of a polypeptide as defined in any one of claims 23, 40-46, 71-73, or 87.

99. A method for inducing neural regeneration and/or repair in a mammal, said method comprising contacting glial cells in a mammal with an effective amount of a polypeptide as defined in any one of claims 23, 40-46, 71-73, or 87.

100. A method of inducing fibroblast proliferation, said method comprising c ntacting said fibroblasts with a polypeptide, as defined in any one of claims 23, 40-46, 71-73, or 87.

101. A method of wound repair in mammals, said method comprising contacting said wound with a polypeptide, as defined in any one of claims 23, 40-46, 71-73, or 87.

102. A method of making a medicament comprising admixing a polypeptide as defined in any one of claims 23, 40-46, 71-73, or 87 with a pharmaceutically acceptable carrier.

103. A method for producing an antibody, said method comprising immunizing a mammal with a polypeptide of any one of claims 23, 40-46, 71-73, or 87.

104. A method for detecting, in a sample, the presence of a molecule having a receptor binding characteristic of a polypeptide defined in any one of claims 23, 40-46, 71-73, or 87, said method comprising the steps of

a) contacting said sample with a polypeptide of any one of claims 23, 40-46, 71-73, or 87, along with a receptor capable of binding specifically to said polypeptide, and

b) detecting competitive inhibition of the binding of said polypeptide to said receptor as an indication of the presence of a receptor binding molecule in said sample.

105. A method for detecting a receptor which capable of binding to a polypeptide as defined in any one of claims 23, 40-46, 71-73, or 87, said method comprising carrying out

affinity isolation on said sample using a said peptide as the affinity ligand.

106. A method for the prophylaxis or treatment of a glial tumor in a patient, said method comprising administering to said patient an effective amount of a substance which inhibits the binding of a factor as defined in any one of claims 23, 40-46, 71-73, or 87 to a receptor therefor.

107. A peptide selected from the following:-

F K G D A H T E
A S L A D E Y E Y M X K
T E T S S S G L X L K
A S L A D E Y E Y M R K
A G Y F A E X A R
T T E M A S E Q G A
A K E A L A A L K
F V L Q A K K
E T Q P D P G Q I L K K V P M V I G A Y T
E Y K C L K F K W F K K A T V M
E X K F Y V P
K L E F L X A K
V H Q V W A A K
Y I F F M E P E A X S S G
L G A W G P P A F P V X Y
W F V V I E G K
A S P V S V G S V Q E L V Q R
V C L L T V A A L P P T
K V H Q V W A A K
K A S L A D S G E Y M X K
D L L L X V

108. A DNA s qu nc as shown in any n f Figur s 28a, 28b and 28c (SEQ ID No. 133-135, r spectiv ly).

109. A polypeptide encoded by a DNA sequence as defined in claim 108 (SEQ ID Nos. 133-135).

110. An antibody to a polypeptide as defined in claim 107.

111. A method of investigating, isolating or preparing a glial cell mitogen or gene sequence encoding said glial cell mitogen, said method comprising contacting tissue preparations or samples with an antibody, said antibody prepared as defined in claim 103.

112. A method for isolating a nucleic acid sequence coding for a molecule having glial cell mitogenic activity, said method comprising contacting a cell containing sample with a glial cell mitogen specific antibody to determine expression of said mitogen in said sample and isolating said nucleic acid sequence from the cells exhibiting said expression.

113. The purified GGF2 polypeptide comprising the amino acid sequence shown in Fig. 45 herein (SEQ ID No. 167).

114. A purified GGF2 DNA encoding the GGF2 polypeptide whose sequences is shown in Fig. 45 (SEQ ID No. 167).

115. A method for inducing myelination of a neural cell by a Schwann cell, said method comprising contacting

said Schwann cell with a polypeptide f any ne f claims 23, 40-46, 71-73, r 87.

116. A method f r inducing acetylcholine rec pt r synthesis in a cell, said method comprising ntacting of said cell with a polypeptide of any one of claims 23, 40-46, 71-73, or 87.

117. An antibody to a polypeptide as defined in claim 23.

118. An antibody to a polypeptide as defined in claim 40.

119. An antibody to a polypeptide as defined in claim 41.

120. An antibody to a polypeptide as defined in claim 42.

121. An antibody to a polypeptide as defined in claim 43.

122. An antibody to a polypeptide as defined in claim 44.

123. An antibody to a polypeptide as defined in claim 45.

124. An antibody to a polypeptide as defined in claim 46.

125. An antibody to a polypeptide as defined in claim 71.

126. An antibody to a polypeptide as defined in claim 72.

127. An antibody to a polypeptide as defined in claim 73.

128. An antibody to a polypeptide as defined in claim 87.

129. A method of purifying a protein with glial cell mitogenic activity, said method comprising contacting a cell extract with an antibody of any one of claims 117-128.

130. A method of treating a mammal suffering from a disease of glial cell proliferation, said method comprising administering to said mammal an antibody of any one of claims 117-128.

131. A vector comprising a DNA sequence as defined in any one of claims 1 or 18-22.

add 92

add C8